



State of Washington

## DEPARTMENT OF HEALTH

NORTHWEST DRINKING WATER REGIONAL OPERATIONS  
20425 72nd Avenue South, Suite 310 • Kent Washington 98032-2388

August 25, 2020

GREG KEITH  
ISSAQUAH WATER SYSTEM  
PO BOX 1307  
ISSAQUAH WA 98027-1307

Subject: Issaquah Water System (ID#36350)  
King County  
South Spar Booster Pump Station - **Approval**  
Submittal #19-1008

Dear Greg Keith:

Thank you for submitting construction documents for the proposed South Spar BPS project. The documents were prepared by your engineer, Jeff Foray, PE and received in our office on October 24, 2019 with amendments received on August 11, 2020.

The revised construction documents for the above project, were reviewed and, in accordance with the provisions of WAC 246-290 are hereby **APPROVED**. The approval issued herein is only valid as it relates to current standards outlined in WAC 246-290. Future revisions in the rules may be more stringent and require facility modifications or corrective action.

It is acknowledged that the South Spar BPS project is included in the City's Capital Improvement Program in the City's 2018 Water System Plan (approved October 17, 2019).

### Design Summary:

This project, combined with the future South Spar Reservoir project, addresses the City's goal to provide at least 40psi at the second story in the Highlands Central Park Operating Area. This project also provides added system resiliency.

The South Spar Pump Station, 2,000gpm firm capacity, will serve the 742 zone from the 297 Valley zone or the Regional Supply. The project includes construction of more than 5,000 linear feet of 12-inch main connecting the pump station to the Valley 297 zone.

Two 125HP vertical turbine pumps normal operating conditions of 1,000gpm at 330 feet TDH each. One 200HP vertical turbine pump normal operating condition of 1,000gpm at 550 feet TDH. Each with variable frequency drives. Each Peerless Model M12LD.



As required in WAC 246-290-120(5) within sixty days following the completion of and prior to the use of the above project or portions thereof, the enclosed construction report must be completed by a professional engineer and returned to this department. In addition, complete and submit the enclosed Pressure, Leakage, and Bacteriological Test Report form for applicable portions of this project.

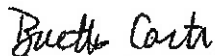
*The department's approval of your water system design does not confer or guarantee any right to a specific quantity of water. The approved number of service connections is based on your representation of available water quantity. If the Washington Department of Ecology, a local planning agency, or other authority responsible for determining water rights and water system adequacy determines that you have use of less water than you represented, the number of approved connections may be reduced commensurate with the actual amount of water and your legal right to use it.*

Regulations establishing a schedule of fees for review of planning, engineering, and construction documents have been adopted (WAC 246-290-990). The total cost is \$1,027.00. An itemized invoice for the review of this project has been sent to the primary contact on file for your water system. Please remit complete payment in the form of a check or money order within thirty days of the date of this letter in the enclosed envelope or mail payment to: **WSDOH, Revenue Section, PO Box 1099, Olympia WA 99507-1099.**

WAC 246-290-120(8) provides that if construction of the project has not been started within two years of the date of this letter, this approval will become null and void unless you take action at that time to arrange for an extension of the approval in the manner prescribed.

Nothing in this approval shall be construed as satisfying other applicable federal, state, or local statutes, ordinances and regulations.

Sincerely,



Brietta Carter, PE  
Regional Engineer  
NW Office of Drinking Water

Enclosures: Construction completion report form  
Invoice

cc: Public Health – Seattle & King County  
Jeff Foray, PE, Kennedy Jenks

## Construction Completion Report

In accordance with WAC 246-290-120 (5), a **Construction Completion Report** is required for all approved construction projects. Purveyors **must** submit a Construction Completion Report to the Office of Drinking Water (ODW) within sixty (60) days of completion and before use of any water system facility. This includes any source, water quality treatment, storage tanks, booster pump facilities, and distribution projects.

*Please type or print legibly in ink:*

**ISSAQUAH WATER SYSTEM**

DOH System ID No.: **36350**

Name of Water System

**GREGORY KEITH**

DOH Project No.: **19-1008**

Name of Purveyor (Owner or System Contact)

(if applicable)

**PO BOX 1307**

Date Construction Documents

Mailing Address

Approved by DOH **8/25/2020**

**ISSAQUAH, WA 98027-1307**

(If applicable)

City

State

Zip

**Project Name and Descriptive Title: SOUTH SPAR BPS**

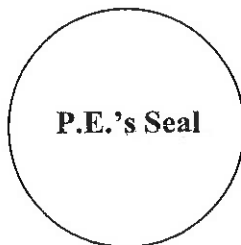
**CHECK ONE:** ☐ Entire Project Completed. ☐ Description of Portions Completed.

### **PROFESSIONAL ENGINEER'S ACKNOWLEDGMENT** *(Complete items below--Attach additional sheets as needed)*

The undersigned professional engineer (PE), or their authorized agent, has inspected the above-described project which, as to layout, size and type of pipe, valves and materials, reservoir and other designed physical facilities, has been constructed and is substantially completed in accordance with construction documents reviewed by the purveyor's engineer or approved by the DOH. In the opinion of the undersigned engineer, the installation, physical testing procedures, water quality tests, and disinfection practices were carried out in accordance with state regulations and principles of standard engineering practice.

I have reviewed the disinfection procedures ☐, pressure test results ☐, and results of the bacteriological test(s) ☐ for this project and certify that they comply with the requirements of the construction standards/specifications approved by the DOH. (Check all boxes that apply that are consistent with the nature of the project.)

This project changes the physical capacity of the system to serve consumers. The system is now able to serve \_ equivalent residential units (ERUs.) ☐ Not applicable



Date Signed

Name of Engineering Firm

Name of PE Acknowledging Construction

Mailing Address

City

State

Zip

Engineer's Signature

State/Federal Funding Type (if any) \_\_\_\_\_

*Please return completed form to DOH regional office checked below.*

☒ NWRO Drinking Water  
Department of Health  
20425 72<sup>nd</sup> Ave. S, Ste 310  
Kent, WA 98032-2358  
(253) 395-6750

☐ SWRO Drinking Water  
Department of Health  
PO Box 47823  
Olympia, WA 98504-7823  
(360) 236-3030

☐ ERO Drinking Water  
Department of Health  
16201 E Indiana Ave, Suite 1500  
Spokane Valley, WA 99216  
(509) 329-2100

For persons with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY 1-800-833-6388).

**The purveyor must attach a completed Water Facilities Inventory (WFI) form in accordance with WAC 246-290-120(6), if applicable. Contact the regional office in your area for WFI forms or additional Construction Completion Report forms.**



# WASHINGTON STATE DEPARTMENT OF HEALTH

## NORTHWEST DRINKING WATER SECTION

### PRESSURE, LEAKAGE AND BACTERIOLOGICAL TEST REPORT

**A. General Information:**

Water System Name _____	Project _____
Engineer _____	Contractor _____
Pipe Location _____	Installation Date _____

**B. Pressure and Leakage Test:**

- |   |          |
|---|----------|
| 1. Is the pipe partially backfilled?  | Yes / No |
| 2. Have the concrete thrustblocks been allowed to cure?   | Yes / No |
| 3. Has water been allowed to sit in the pipe at least<br>24 hours prior to the beginning of the test? | Yes / No |
| 4. Have provisions been made to remove any entrapped air?   | Yes / No |
| 5. Are all test ends capped and properly braced?  | Yes / No |

Test Procedure (APWA, AWWA, C-600, etc.) _____	
Pipe Material _____	Pipe Class _____
Pipe Diameter _____	Length of Test Section _____
Maximum Test Pressure _____	Maximum Test Pressure _____
Rated Valve Working Pressure _____	

Allowable Leakage	$L = \frac{ND\sqrt{P}}{7400}$	Where: N = Number of joints in pipe tested
gallons/hour		D = Nominal pipe diameter, inches
		P = Average pressure during test, psi

Duration of Test _____	Gallons of Water Used _____
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I have reviewed the results of the pressure and leakage test and certify that there was no visible evidence of leakage during the test and procedures utilized and results obtained by the contractor comply with the requirements of the construction specifications approved by the Washington State Department of Health.

_____ Engineer's Signature	_____ Date
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**C. Disinfection and Bacteriological Test:**

Type of Disinfection _____	Amount of Disinfection _____
Volume of Pipe _____	Calculated Residual _____
Date Disinfection Added _____	Date Disinfection Flushed _____
Initial Residual _____	Final Residual _____
Lab Sample Number _____	Test Results (attached) _____

I have reviewed the disinfection procedures and results of the bacteriological test for this project and certify that they comply with the requirements of the construction specifications approved by the Washington State Department of Health.

_____ Engineer's Signature	_____ Date
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